

REMARKS

Claims 23-43 were examined on their merits and claims 44-45 have been added to the application.

Formal Matters

1. Applicant thanks the Examiner for allowing claims 23-33.

Art Rejections

1. Claim 34 stands rejected under 35 U.S.C. § 102(b) as being anticipated by McShane U.S. Patent No. 5,157,480 ("McShane"). Claim 34 is an independent claim. Applicant respectfully traverses this rejection for at least the reasons stated below.

McShane is directed to a semiconductor device having dual electrical contact sites. More specifically, McShane discloses a semiconductor device having both bottom-side contacts and peripheral contacts to provide surface mounting options. McShane, however, fails to disclose at least the following underlined recitations of independent claim 34:

providing a first die, said first die having an integral planar connection member and having at least one conductor patterned on said first die;
providing a second die having at least one conductor patterned on said second die; and
bonding said second die to said first die such that the conductor on said first die is aligned with said conductor on said second die and said integral connection member on said first die forms a planar connection component for said dielectric package.

Figure 5 of McShane depicts a method wherein a semiconductor device is mounted onto a substrate, such as a PC board, to improve heat dissipation. Solder balls 72 are used to electrically attach the semiconductor device 60 to the PC board 75. In summary, McShane

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simply discloses connecting a semiconductor device to a PC board. McShane does not disclose a first die having a integral connection member wherein when bonded to said second die a planar connection component is formed for the dielectric package.

Because McShane fails to disclose each limitation of independent claim 34, McShane cannot possibly anticipate the claimed subject matter. The Examiner is therefore respectfully requested to withdraw the § 102(b) rejection from independent claim 34.

2. Claims 35-37 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McShane, as applied to claim 34, and in further view of Takahashi U.S. Patent No. 5,825,082 ("Takahashi").

Claims 35-37 respectively depend from independent claim 34. McShane is deficient with respect to independent claim 34 for at least the reasons stated above. Furthermore, Takahashi fails to compensate for the deficiencies of McShane.

Takahashi is directed to a semiconductor device wherein a first resin-encapsulated package is mounted on a second resin encapsulated package. The Examiner argues that Figure 4 discloses a package having a female connection component. However, Figure 4 simply discloses leads 8 attached to a semiconductor package. The combination of McShane and Takahashi clearly does not disclose, teach or suggest a first die having an integral planar connection member wherein when bonded to a second die, such that the conductors align, a planar connection component for said dielectric package is formed.

For the reasons stated above and by virtue of their dependency from claim 34, Applicant respectfully submits that the combination of McShane and Takahashi fails to render obvious the

claimed subject matter. The Examiner is therefore respectfully requested to withdraw the § 103(a) rejection from claims 35-37.

3. Claims 38-40 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McShane, as applied to claim 34, and in further view of Tukamoto et al. U.S. Patent No 5,376,825 ("Tukamoto"). Claims 38-40 respectively depend from independent claim 34. McShane is deficient with respect to independent claim 34 for at least the reasons stated above. Additionally, Tukamoto fails to fulfill the deficiencies of McShane.

Tukamoto is directed to a flexible integrated circuit package for computer systems. Tukamoto does not disclose, teach or suggest a first die having an integral planar connection member wherein when bonded to a second die, such that the conductors align, a dielectric package having planar connection component is formed.

Therefore, Applicant submits that claims 38-40 are patentable at least by virtue of their dependency. The Examiner is therefore respectfully requested to withdraw the § 103(a) rejection from claims 38-40.

4. Claim 41 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over McShane in view of Tukamoto, as applied to claims 38-40, and in further view of Takahashi. Claim 41 respectively depends from independent claim 34. The combination of McShane, Tukamoto and Takahashi is deficient with respect to independent claim 34 for at least the reasons stated above.. Therefore, Applicant submits that claim 41 is patentable at least by virtue

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of its dependency. The Examiner is therefore respectfully requested to withdraw the § 103(a) rejection from claim 41.

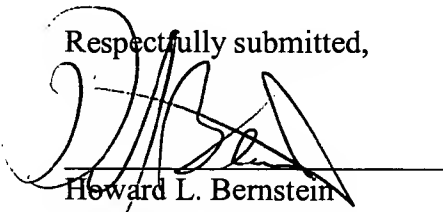
5. Claims 42-43 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McShane, as applied to claim 34, and in further view of Tukamoto. The combination of McShane and Tukamoto are deficient with respect to independent claim 34 for at least the reasons stated above. Applicant therefore submits that claims 42-43 is patentable at least by virtue of their dependency from independent claim 34. The Examiner is therefore respectfully requested to withdraw the § 103(a) rejection from claims 42-43.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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APPENDIX
VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The claims are amended as follows:

34. (Amended) A method of making a dielectric package for housing a component and having an integral connection [member]component comprising:

providing a first die, said first die having an integral planar connection member and having at least one conductor patterned on [the] said first die;

providing a second die having at least one conductor patterned [pattered] on said second die; and

bonding said second die to said first die such that the conductor on said first die is aligned with said conductor on said second die and said integral connection member on said first die forms a planar connection component for said dielectric package.

35. (Amended) The method of making a dielectric package for housing a component and having an integral connection [member] component of claim 34, wherein the single connection component is formed having a male shape. [first die is formed having a male shape.]

36. (Amended) The method of making a dielectric package for housing a component and having an integral connection [member] component of claim 34, wherein the single connection component is formed having a female shape. [second die is formed having a male shape.]

37. (Amended) The method of making a dielectric package for housing a component and having an integral connection [member] component of claim 36, further comprising:

coupling a component to said first die prior to bonding the second die to said first die.

38. (Amended) The method of making a dielectric package for housing a component and having an integral connection [member] component of claim 34, further comprising:

etching an aperture into said second die.

39. (Amended) The method of making a dielectric package for housing a component and having an integral connection [member] component of claim 38, wherein a component is placed through said aperture on said second die and coupled to said first die after the second die is bonded to the first die.

40 (Amended) The method of making a dielectric package for housing a component and having an integral connection [member] component of claim 34, wherein the component is an integrated circuit.

41. (Amended) The method of making a dielectric package for housing a component and having an integral connection [member] component of claim 40, wherein the integrated circuit is a millimeter microwave integrated circuit.

42. (Amended) The method of making a dielectric package for housing a component and having an integral connection [member] component of claim 34, wherein the component is an optical fiber.

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43. (Amended) The method of making a dielectric package for housing a component and having an integral connection [member] component of claim 34, wherein the component is an optical semiconductor.